

7–49 days). In 16% of patients time to enter care took over 150 days; those infected by heterosexual contact or injecting drug use were more likely to be in this group. Patients born outside the Netherlands were also more likely to enter care late. 2). From February 2009 until April 2010, 120 participants were included in the study (response 70%). The majority (n=108) were men who have sex with men (MSM). For 78% of participants a date of entry into care was known; median time into care was 8 days (range 0–104 days). Twenty two per cent had not entered care yet of whom 16% had CD4 cell counts below 350. Of participants who were directly referred to an HIV treatment 10% delayed for medical care compared to 45% of participants wanted to make an appointment on their own initiative.

Conclusions Specific subpopulations such as heterosexuals and ethnic minorities are at risk for entering care late after being diagnosed HIV positive. Results from the prospective study show that direct referral from STI clinic to an HIV treatment centre leads to less delay. Testing of those at risk is not enough to interrupt HIV transmission chains, entry into care needs to be assured as well.

05-S2.03 EFFECT OF IMPROVING THE STI SERVICES IN SEVEN PROVINCES OF CHINA

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Background The STI services can reduce HIV transmission and have been the important component of HIV control programmes. In China, the STI services remain weak. Under the framework of AIDS control programme of the Global Funds Round 4, we conducted the sub-programme to improve STI services in 21 counties of 7 provinces in China from 2007 to 2009, including one-week training workshops for all STI care providers, two-month field training for key STI clinicians at STD Clinic of National Center for STD Control, STI drug assurance, and quality services offering for STI patients. Annually the effect of STI services was assessed according to the guideline of WHO/UNAIDS in the 21 counties.

Methods The assessment of STI services was through health facility survey, including three indicators: (1)STI service indicator 1 (SI1) is defined as the per cent of patients with STIs at observed health care facilities who are appropriately diagnosed and treated according to the national guidelines on STI treatment in China; (2) STI service indicator 2 (SI2) is defined as the per cent of patients with STIs who are given advice on condom use and partner notification and referral for HIV testing in term of national standards; (3)Standardised STI service indicator (SSI) means the comprehensive case management including SI1 and SI2. The sample size of STI patients between provider and client interactions observed was 40 per county according to the recommendation of national experts. Data were collected in observations of provider-client interaction at the health-care facilities offering STI services by trained professionals. The software of EpiData3.1 and SPSS 11.5 was used to data entry and analysis.

Results From 2007 to 2009, the SI1 was 46.16% (397/860) (95% CI 42.83% to 49.49%), 62.94% (603/958) (95% CI 59.88% to 66.00%), 81.96% (686/837) (95%CI 79.35% to 84.57%) on average in 21 counties, respectively, and there was significantly increased trends (χ^2 is 234.30, $p=0.000$); the SI2 was 28.32% (243/858) (95%CI 25.31% to 31.33%), 45.04% (431/957) (95% CI 41.89% to 48.19%), 80.33% (678/844) (95% CI 77.65% to 83.01%) on average for

these counties, respectively, and there was also significantly increased trends (χ^2 is 459.37, $p=0.000$). For overall STI service quality, SSI was 20.98% (180/858) (95% CI 18.26% to 23.70%), 40.02% (383/957) (95% CI 36.92% to 43.12%), 67.26% (563/837) (95% CI 64.08% to 70.44%), respectively in 2007–2009, and there was significantly increased trends (χ^2 is 370.81, $p=0.000$). The STI service indicators in rich areas were higher than in poor counties.

Conclusions The quality of STI services was significantly improved through the Global Funds Round 4 in 21 counties of seven provinces in China, and should be scaled up to other areas in the country.

05-S2.04 EVALUATION OF SEXUALLY TRANSMITTED INFECTION CLINICAL SERVICES IN GAUTENG PROVINCE, SOUTH AFRICA: KNOWLEDGE, ATTITUDES, AND BELIEFS AMONG HEALTH CARE PROVIDERS

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Background The STI clinical encounter is an opportunity to identify and prevent new HIV as well as STI infections. We sought to evaluate the STI clinical encounter among public and private clinicians in South Africa to determine opportunities for improved prevention services.

Methods From November 2008 to March 2009, we studied the knowledge, beliefs, and attitudes of STI health care providers in rural and urban facilities in Gauteng Province. We selected public and private health facilities reporting >100 patients annually, stratifying among 6 municipalities. We interviewed managers from eligible clinics and all eligible staff to participate in self-administered, computer-assisted surveys. We used STATA 9 for univariate, stratified analysis by χ^2 and Fisher's exact test.

Results Of 641 eligible clinicians, 613 (96%) completed the survey, including 100% of public and 65% of private providers. Most clinicians were nurses (91%), female (89%), from public clinics (92%), and had formal STI (87%) or HIV (96%) training within 10 years. The median number of STI patients seen daily was 6 and most providers were experienced in STI care (median 9.5 years), although more so in private clinics (11.7 years). Most clinicians recognised most of the common syndromes and correctly identified treatment options, particularly for bacterial genital ulcer syndrome. Most (94%) understood genital herpes recurs, but only 85% agreed herpes could be treated. Nonetheless, misperceptions were common: less than half (48%) agreed with the statement that some STIs cannot be cured with medication, only 5% disagreed that "herpes is curable," 34% agreed "untreated STIs develop into AIDS," and 33% agreed that "HIV medications were more dangerous than having AIDS." STI or HIV training was either unrelated or inversely related to these misperceptions. While most providers (95%) felt offering HIV testing to STI patients was one of their most important responsibilities, many (27%) believed it permissible to test patients for HIV without consent. Clinicians reporting having STI or HIV training were more likely to agree with HIV testing without consent (30% vs 17%, $p=0.001$) see Abstract O5-S2.04 table 1.

Conclusions Most clinicians understood STI syndromic treatment, however many misunderstood important aspects of HIV/STI clinical care and their implications for prevention. Brief refresher courses on specific aspects of treatment and prevention may benefit HIV/STI clinical care and prevention in Gauteng.

Abstract O5-S2.04 Table 1 Sexually transmitted infections provider knowledge, beliefs and attitudes in Gauteng, South Africa, 2008–2009

	Agree		Disagree		Do Not Know	
	%	n	%	n	%	n
N = 611						
Knowledge						
Some STIs cannot be cured with medication	48.1	294	45.7	279	6.2	38
Genital herpes often recurs	93.1	569	3.8	23	3.1	19
Genital Herpes often causes urethral discharge in men	25.7	157	87.4	377	12.6	77
Genital herpes is curable	42.2	258	4.8	324	53.0	29
Genital Herpes sores can be treated with medication(s)	84.9	519	10.0	61	5.1	31
Untreated STIs can develop into AIDS	33.9	207	60.6	370	5.6	34
Many patients with STIs already have HIV or AIDS	42.4	259	52.2	319	5.4	33
Beliefs						
I think one of my most important responsibilities is to strongly recommend HIV testing to each of my STI patients	93.6	572	5.1	31	1.3	8
I think traditional herbal medicine is able to cure some STIs	16.2	99	81.0	495	2.8	17
I think traditional herbal medicine is able to cure HIV/AIDS	1.5	9	79.7	487	18.8	115
In the long run, some HIV medication(s) can be more dangerous than having AIDS	31.1	190	65.1	398	3.8	23
Attitudes						
Under certain circumstances, it is OK to test patients for HIV without telling them	26.0	159	71.8	439	2.1	13

O5-S2.05 ROLE OF REGIONAL REFERENCE LABORATORIES FOR SEXUALLY TRANSMITTED INFECTIONS IN IMPROVEMENT OF SECOND GENERATION HIV SURVEILLANCE EXPERIENCE FROM THE CENTRAL AMERICA REGION

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Background WHO/UNAIDS recommends National HIV/AIDS and Sexually Transmitted Infection (STI) Control Programs to implement integrated HIV, STI and behavioural surveillance to assess the disease burden, and to monitor the temporal trends of HIV/STI prevalence and high-risk sexual behaviours. Despite this recommendation, there is limited STI prevalence data available in many resource poor countries owing to lack of STI laboratory capacity to detect multiple STIs. The CDC STD lab explored the feasibility of a decentralised laboratory strengthening approach by applying more advanced molecular STI diagnostic methods to support the second generation surveillance (SGS) activities in the Central American Region during 2007–2011.

Methods CDC STD lab developed a real-time multiplex PCR (MPCR) to detect *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, *Trichomonas vaginalis*, and *Mycoplasma genitalium*. In collaboration with regional partners, CDC identified and transferred the diagnostic technology to a regional STI reference laboratory in 2008. The regional reference laboratory provides MPCR testing on specimens collected for surveillance purpose. This standardised SGS study design was implemented at regular intervals in multiple countries in the region to estimate the disease burden and to monitor temporal STI trends.

Results During 2007–2010, four national integrated sexual behavioural and biomarker surveys were implemented using CDC’s affiliated regional STI reference center. The quality STI prevalence data was made available to the national HIV/STI programs in Honduras, El Salvador, Nicaragua and Colombia. Similar CDC supported surveillance studies are in-preparation in Guatemala, Belize, Panama, Honduras (second round) and the Dominican Republic.

Conclusions Based on the experience from the Central American Region, it is feasible to implement integrated HIV, STI and behavioural surveillance surveys using robust molecular techniques in resource poor settings. In collaboration with regional partners, CDC’s approach to STI laboratory capacity strengthening through establishing a regional reference laboratory should be expanded to other regions.

O5-S2.06 ABSTRACT WITHDRAWN

Health services and policy oral session 3—partner notification

O5-S3.01 USE AND EFFECTIVENESS OF EXPEDITED PARTNER THERAPY IN AN INNER-CITY STD CLINIC

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Background In November 2006, the Denver Metro Health (STD) Clinic (DMHC) began offering Expedited Partner Therapy (EPT) to heterosexual patients infected with *Chlamydia trachomatis* (Ct) or *Neisseria gonorrhoeae* (GC). Among those who accept EPT, the patient delivers treatment to his or her partner(s), removing the need for a clinic visit. We investigate demographic differences among patients who accepted EPT and examine re-infection rates among those who return to the clinic.

Methods Data were extracted from the electronic medical record (EMR) for 2644 eligible patients offered EPT between November 2006 and October 2010. Acceptance rates are compared across demographics and infection status. Rates of re-infection are examined among the 339 patients who returned for re-testing within 21 to 90 days of treatment. Dual infections are excluded.

Results Overall, 763 (28.3%) eligible patients accepted EPT. Women were more likely than men to accept EPT (35.9% vs 23.8%, $p < 0.01$). Patients younger than 40 accepted EPT at a higher rate than those 40 or older (29.6% vs 20.0%, $p < 0.01$). African Americans were least likely to accept EPT (23.0%), whereas approximately 30% of Hispanics and Whites accepted and those reporting multiple races accepted at the highest rate (43.6%) ($p < 0.01$). Ct infected patients were significantly more likely to accept EPT than those infected with GC (32.7% vs 24.6%, $p < 0.01$). Within 21 to 90 days of treatment initiation, 339 patients returned for re-testing (221 for Ct and 118 for GC). Overall, re-infection rates differed significantly by EPT acceptance at the initial visit with 11.1% re-testing positive among those who accepted EPT compared to 20.4% among those who refused ($p = 0.04$) (Abstract O5-S3.01 table 1). When stratified by type of infection, the differences were no longer significant but the direction of the relationship remained. Among those originally Ct-infected, 9.1% of those who accepted EPT re-tested positive vs 15.3% among those who refused ($p = 0.19$). Among those originally GC-infected, 16.1% of EPT acceptors re-tested positive compared to 28.7% of those who refused ($p = 0.17$).

Abstract O5-S3.01 Table 1 Use and effectiveness of expedited partner therapy in an inner-city STD clinic Mickiewicz T, Al-Tayyib AA, Mettenbrink C, Rietmeijer CA

	Re-infection rates among those returning to clinic for re-testing		
	Ct	GC	Ct or GC*
Accepted EPT	7/77 (9.1%)	5/31 (16.1%)	12/108 (11.1%)
Refused EPT	22/144 (15.3%)	25/87 (28.7%)	47/231 (20.4%)

* $p < 0.05$.